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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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MORGAN & FINNEGAN, L.L.P.
3 WORLD FINANCIAL CENTER
NEW YORK, NY 10281-2101

EXAMINER

PADGETT, MARIANNE L

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 12/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/729,184

Applicant(s)

LEFEVRE ET AL.

Examiner

Marianne L. Padgett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/4/03 & 10/11/05.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
4a) Of the above claim(s) 7-16 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-6 and 17-20 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

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1. Applicant's election without traverse of method claims 1-6 & 17-20 in the reply filed on 10/11/2005 is acknowledged.

2. Claims 1 & 17-18 objected to because of the following informalities:

In the independent claims 1 & 17, the phrase "realizing an optical function" or "to realize..." is non-idiomatic, in that the verb "realize" generally refers to a thought process, not the creation or the manufacture of some characteristic or function.

In claims 18, "surface..." is a singular noun and "our" is a plural verb.

Appropriate correction is required.

3. Claims 1-6 & 17-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The body of independent claim 1 is not commensurate in scope with its preamble, as the component is not required to have or obtain or "realize" any optical function, thus the scope of the claim is unclear.

In claims 1 & 17, the scope of "indicating device" is unclear, because what is being indicated or how whatever is indicated, has never been defined. Are indicator lights on the dashboard in the interior of the car being referred to, or any of the gauges that are present in the dashboard that could also indicate information, or just some logo that is somewhere on the car that is a device for indicating who made it, or the turn signals on the exterior of the car that are also lighting devices to indicate the direction the driver intends to go, etc.? It is noted that figure 1 illustrates a "direction indicator" in the structure of a headlamp, which does not use typical American English jargon of -- turn signal --, but is indicative of such an intended use, however as noted the claims are not so limited.

With respect to claim 2, it is not clear when the metallization of the component is occurring, before the laser radiation, during the laser radiation, or after the laser radiation. It is noted that this is

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actually a scope issue, however it is not clear from the specification that such a broad scope was actually intended, as no disclosure of simultaneously laser radiating and metallizing was found in the specification, making meaning in light of the specification uncertain.

4. Claims 2-4 & 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The scope of claim 2, which includes laser radiating while metallizing was not found to be enabled by the body of the specification.

While there was disclosure found on pages 3 & 9 of the specification, which said to emboss plastic materials as used for the claimed components using a laser, this was not found to be enabled, because (1) on page 3, the second and third paragraphs indicate that while the lasers used will plate metal on the plastics used, they will not affect the plastics, however in the following paragraph the specification contradicts this by saying that the lasers (undifferentiated) will embossed the plastic material (apparently the same plastic material), which it just said was unaffected by the lasers. (2) The examples on pages 7, 8 and 9, all indicate a component formed by thermoplastics being injected, but the first two examples are then completely metallized and thereafter the metal is patterned by laser (YAG, CO₂ or excimer) ablation without affecting the plastic, but then the page 9 example uses the same lasers to emboss or texture the plastic that is apparently undifferentiated from that used in the previous examples. How these lasers that apparently do not affect the plastic, have been given the ability to now affect it by somehow texturing or by embossing (i.e. to raise in relief from a surface, Webster's), is not explained by the specification, hence is not considered to be adequately enabled for one of ordinary skill in the art to perform the invention as set forth and claimed. Note there is nothing in the specification that discusses how taught lasers cause taught plastics to have portions of their surface raised above other areas of the surface by the laser, nor is

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the less specific "texturing" provided with means to effect this outcome, however in claim 18 as written part of the scope is enabled, in that the component being irradiated is inclusive of a metallized plastic component, where laser ablation patterning will effectively caused texturing, but how direct texturing other than this may occur is not adequately enabled.

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

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Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-2, 5-6 & 17-20 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-2, 4-5 & potentially not yet entered after final claims 11-14 of copending Application No. 10/729,305. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are of overlapping scopes with the present claims reciting metallization in the dependent claims instead of the independent claim(s), and the preamble attributing and "optical function" to the component as claimed in both cases, whereas the (305) application claims a decorative motif, which is considered to be of overlapping scope, as all coatings or treatments that have a visible effect have in essence an optical function, i.e. something that is opaque has the optical function of blocking light, while transparent as the optical function of passing light, with translucent or the like that is colored or patterned may affect the quality of light, etc., hence the (305) pre-and application is an obvious variation of the present application that is slightly narrower, so would have been obvious to one of ordinary skill in the art.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

7. Claims 1-2, 5-6 & 17-20 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Shaffer et al. (5,817,243).

Shaffer et al. teach creating decorative contrast designs on motorcycle and automobile parts, that employ a laser scanning process with pulsed lasers, such as YAG, CO₂ and excimer lasers, where the parts to be treated include molded translucent or transparent plastic substrates that are for automobile or motorcycle light globes and lenses, or mirrored glass, etc. It is taught that parts may be directly etched or

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plated with metal and then laser ablated to affect taught designs. See the abstract; figure 1; column 1, line 6-15 & 35-63; column 2, lines 8-36; column 3, line 63-column 4, lines 1-34, 43-53 & 61-67; column 5, lines 1-14; examples on column 6-8, especially example 1, 3 & 5.

8. Claims 1, 6 & 17-18 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Pyburn et al. (5,614,338).

Pyburn et al. teach making a graphic for a backlit component, such as a button for an illuminated graphic display of an automobile instrument panel, where it is noted that such a device reads on both the claimed indicating and claimed lighting device options for motor vehicles in applicants' claims. Pyburn et al. uses laser irradiation (YAG, CO₂) to produce substantially opaque regions in transparent polymeric material due to reaction of the laser energy with pigment present therein, thus producing a pattern with areas of different optical function. It is also taught that the laser may rough in the surface under some circumstances, which reads on a type of texturing. In Pyburn et al., see the abstract; figures; column 1, lines 5-20; column 2, lines 38-67; column 3, line 61-column 4, line 68+, especially 20-37 & 62-65 (roughing).

9. Claims 1-2, 5-6 & 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai (5,911,317), in view of Pyburn et al. (discussed above in section 8).

Tsai teaches a technique for making a light permeable metal plated rubber key that is taught to be useful in all kinds of electronic and telecommunication products. The key has a silicone rubber base with a layer of ink in a desired color and a protective resin layer thereover, which is then vacuum spray plated with a metal such as Ni, Cr, Ti, Al, Cu, Sn, Ag or Au, to completely metallize, that is subsequently laser engraved, i.e. laser ablated, to display a desired letter, and finely protectively coated. In Tsai, see the abstract; figures; column 1, line 7-11; column 2, lines 8-40.

Tsai does not mention the use of their key, i.e. button, in any kind of motor vehicle, however motor vehicles instrument panels are replete with various electronics and controls therefore, hence as such

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it would have been obvious to one of ordinary skill in the art to use the keys or buttons of Tsai for such electronics in automobiles that require buttons, especially in view of Pyburn et al., who teach and demonstrates the use of backlit buttons in automobile instrument panels, providing further motivation for the above stated obviousness.

10. Claims 1-2, 5-6 & 17-20 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Shizuku Hideji (JP 2000-176659, Derwent & JPO abstracts + machine translation).

This Japanese reference teaches thermocompression bonding or hot stamping of metal foil onto a plastic or glass substrate base, where the metal is then patterned the laser marking such that the laser evaporates or scatters metal from the metal layer in order to draw a character, number, mark, pattern, etc., therein. YAG lasers are taught for use in this patterning process, and end uses include use for buttons in motor vehicles, portable telephones, etc., thus reading on the claimed indicating devices for mobile vehicles. Particularly see the two English abstracts and paragraphs [0001], [0005-6]. As the quality of the new sheen translation is poor with untranslated words, a formal translation has been ordered, but not yet received.

11. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shaffer et al. as applied to claims 1-2, 5-6 & 17-20 above, and further in view of Pope (GB 2244934 A) or Ouderkirk et al. (2004/0145289 A1).

While Shaffer et al. teach laser etching or ablation of either the glass or plastic substrate material, or of metal plated on substrate material for automobile parts, or teach discoloring lenses or globes for automobile lights to create patterns within the substrate, they do not teach "laser embossing", unless by laser embossing applicant actually been laser etching, in which case claimed 3 belongs in the 102 rejection, however embossing in general does not mean taking away of material, as seated beside a dictionary definition.

Ouderkirk et al. teach multilayer reflectors that are placed in front of light sources, that are made of polymeric materials, which may have nonuniform thickness or thickness gradients along its length and/or width that have been produced via thermoforming, embossing, laser embossing, etc., that are taught to be advantageous as the variation in thickness produced, potentially by laser embossing, reduces an undesirable "halo effect" (figure 13, [0089-93]), which would have been relevant to automobile lights. Therefore, it would have been obvious to one of ordinary skill in the art, given Shaffer et al.'s laser treated globes and lenses that may be textured or patterned, to treat them with the laser embossing as suggested by Ouderkirk et al. to effect a gradient thickness reflective layer in order to reduce halo effects on the automobile lights.

Alternately, Pope teaches embossing holograms possibly by laser embossing in plastic substrates, where the hologram may be a reflection hologram, i.e. metallized, hence it would have been obvious to one of ordinary skill in the art given that Shaffer et al. teach the desirability of laser etching or drawing figures into the material of the light globes and lenses of automobiles, to make those figures holographic laser embossed figures due to the desirable and dramatic aesthetic effects as taught for holographic patterns therein. See the abstract; page 1, lines 8-23; page 3, lines 9-16 & 21-page 4, line 6.

12. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shizuku Hideji, or Tsai (5,911,317) in view of Pyburn et al, as applied to claims 1-2, 5-6 & 17-20 above, and further in view of Weber et al. (2001/0019013 A1).

The art of the above-discussed rejections do not employ laser embossing, however Weber et al. shows that analogous buttons or keys or switches (which can be used to turn on headlights) that are to have symbol displayed on them, may have that symbol embossed where lasers may have been employed, hence it would have been obvious to one of ordinary skill in the art that any of the symbols as created on buttons/keys from the above rejections could have been additionally distinguished by raising of the area to be patterned via laser embossing, providing a laser capable of interacting with the polymeric material

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of the button/key was employed, thereafter the succeeding metallizing patterning steps could proceed as taught, since the patterning techniques would have been complementary to each other, providing care was taken in selection of laser wavelengths for the two different techniques or materials to enable the effects.

13. Other art of interest includes: Hutton (EP 0652400 A1) who teaches use of YAG or carbon dioxide lasers to pattern reflective Al layers on glass or clear plastic substrates to make light pattern generators, analogous to headlamps or other lighting systems, and cumulative to above rejections; Heyman et al. with further laser ablation marking techniques to be used on transparent, i.e. glass substrates; Kniess et al. (6,727,308 B2) who teach laser marking plastics which may be used in automotive vehicles are you use of a dopant metal, semimetal, or affect pigment within the thermoplastic to be marked and Feng et al. (6,627,299 B1) with analogous teachings to Kniess et al.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marianne L. Padgett whose telephone number is (571) 272-1425. The examiner can normally be reached on M-F from about 8:30 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks, can be reached at (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MLP 12/2&3/2005



MARIANNE PADGETT
PRIMARY EXAMINER